## A New Species of Rana from Ningxia Hui Autonomous Region

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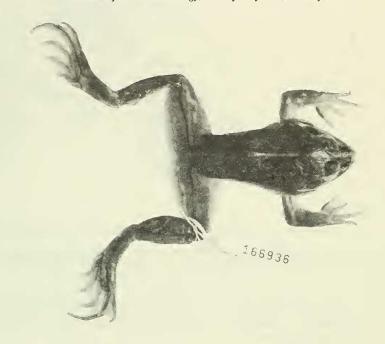


FIG. 1. Holotype CIB 80001 - CAS 166936 of Rana tenggerensis

Two specimens of Rana were collected during the joint 1987 Chengdu Institute of Biology and University of California Expedition to the deserts of northern China. They were found along the banks of the Yellow River (Huang He) where it flows along the edge of the Tengger Desert in Ningxia Hui Autonomous Region. Both specimens were collected after dark in pools along the banks of the river. Upon examination of these specimens we determined that they represent an undescribed species (Fig.1). This species, named after the Tengger Desert, is closely related to Rana nigromaculata Hallowell. Figure 2 shows

the distribution of both forms. The distribution shown for *Rana nigromaculata* was compiled from Dixon (1956), Lui (1950), Lui & Hu (1961), Moriya (1955), Okada (1927), Kawamura & Nishioka (1979), Shannon (1956), and Bannikov (1977). The nomenclature used follows that of Kawamura & Nishioka (1979).

## Rana tenggerensis sp. nov.

Holotype: CIB 80001 - CAS 166936, an adult male from along the north shore of the Yellow River (Huang He), at Shapotou Desert Research Station, Shapotou (37° 30'N 104° 58'E), Yinnan Prefecture,

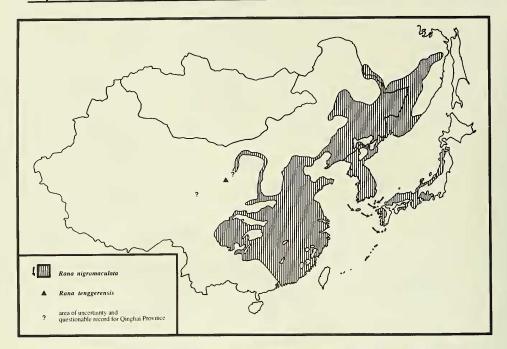


FIG. 2. The distribution of Rana nigromaculata and Rana tenggerensis. The question mark between Rana nigromaculata and Rana tenggerensis represents an area of uncertainty. The other question mark to the southwest of Rana tenggerensis represents a questionable record from Qinghai Province.

Ningxia Hui Autonomous Region, China. The specimen was collected August 14, 1987 by J. Robert Macey and Theodore J. Papenfuss. The Holotype is deposited at the Chengdu Institute of Biology.

Paratype: CAS 166808, an adult male from along the south shore of the Yellow River (Huang He), at Shenjiatan (37° 28' N 105° 18' E), Yinnan Prefecture, Ningxia Hui Autonomous Region, China. The specimen was collected August 13, 1987 by J. Robert Macey and Theodore J. Papenfuss. The specimen is deposited at the California Academy of Sciences.

**Diagnosis:** This new form, Rana tenggerensis, is a close relative of Rana nigromaculata Hallowell, but differs from the latter in having 1) a wider head, 2) the nostril closer to the eye than to the tip of the snout, 3) the tibia to snout-vent length proportionally shorter, 4) full webbing

with almost no notch, 5) a more rugose back, 6) no dark spots on the lips, 7) no dark stripe in front of the shoulder.

## Literature Cited

BANNIKOV, A. G., DAREVSKY, I. S., ISHCHENKO, E. G., RUSTAMOV, A. K., AND SHCHERBAK, N. N. 1977. Guide to amphibians and reptiles of the USSR fauna. Prosveshchenie, Moskva. 1-415. (In Russian.)

DIXON, J. R. 1956. A collection of amphibians and reptiles from west central Korea. Herpetologica 12:50-56.

LIU, C. C. 1950. Amphibians of western China. Fieldiana, Zool. Mem., v.2, 400 pp., 100 text figs.

LIU, C. C. AND C. HU. 1961. Tailless Salientia in China. Kolsuo-Choppan [Scientific Press], Peiking, 364 pp, 151 fig., 28pls. (In Chinese.)

- KAWAMURA, T. AND M. NISHIOKA, 1979. Isolating mechanisms among the water frog species distributed in the Palearctic Region. Mitt. Zool. Mus. Berlin, Bd. 55, Heft I, 171-185.
- MORIYA, K. 1955. Local races in the pond frog, *Rana nigromaculata*, with special reference to their distribution. Bull. Biogeograph. Soc. Japan (recent conceptions of Japanese Fauna) 16-19:354-359. (In Japanese.)
- OKADA, Y. 1927. A study on the tailless batrachians of Japan. Ann. Zool. Japon. 11:97-103.
- SHANNON, F. A. 1956. The reptiles and amphibians of Korea. Herpetologica 12:22-49.